



Màster en Relacions Internacionals Seguretat i Desenvolupament (MURISD)

The process of incorporating agriculture into the UNFCCC negotiations

How does the Food and Agriculture Organization of the United Nations influence the climate change negotiations via institutional interaction?

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Treballs de màster i postgrau. Màster en Relacions Internacionals, Seguretat i Desenvolupament (MURISD). Curs 2017/18

Treballs de màster i postgrau. Màster en Relacions Internacionals, Seguretat i desenvolupament (MURISD). Curs 2017/18

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**MÁSTER UNIVERSITARIO EN RELACIONES
INTERNACIONALES, SEGURIDAD Y DESARROLLO**

**The process of incorporating agriculture into the UNFCCC
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*How does the Food and Agriculture Organization of the United Nations influence the
climate change negotiations via institutional interaction?*

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Julio 2018

*Declaro, con mi firma al pie, que el presente trabajo es original y que no
contiene plagios o usos indebidos de otras fuentes y acepto las
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Summary:

At its latest Conference of the Parties in November 2017, the United Nations Framework Convention on Climate Change adopting the 'Koronivia joint work on agriculture' agreement, transferring agriculture to the agenda of its two Subsidiary Bodies. This study approaches agriculture's incorporation into the Convention from the theoretical perspective of institutional interaction – a framework for understanding how one institution influences another – in order to show that the involvement of the Food and Agriculture Organization of the United Nations in the negotiations has played a decisive role in the Convention's growing consideration of agriculture.

Keywords: institutional interaction, agriculture, climate change, UNFCCC, FAO

Paraules clau: interacció institucional, agricultura, canvi climàtic, UNFCCC, FAO

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Introduction

This study focuses on the role that the Food and Agriculture Organization of the United Nations (FAO) plays in the incorporation of agriculture into the United Nations Framework Convention on Climate Change (UNFCCC) negotiations, using the theoretical framework of institutional interaction.

Since May 2012 at its 36th session, the UNFCCC's Subsidiary Body for Scientific and Technological Advice (SBSTA), which holds meetings alongside and in between the UNFCCC's Conferences of the Parties (COPs), has gradually begun incorporating agriculture into its agenda, in preparation for a COP decision. In November 2017, at the COP23, this finally led to the landmark 'Koronivia joint work on agriculture' agreement. In preparation of this decision the SBSTA hosted 5 years of workshops and meetings at which the FAO, the Consortium of International Agricultural Research Centres (CGIAR), the World Food Programme (WFP), and the International Fund for Agricultural Development (IFAD), amongst others, were invited to present their research and recommendations on jointly addressing agriculture and climate change. This gave them the possibility to shape the UNFCCC's agreement on agriculture with their expert knowledge and interests in favour of climate-smart agriculture – a set of agricultural practices that the FAO coined in 2010, which combine sustainable intensification, climate change adaptation, and mitigation (FAO, 2017a).

To understand the effect that these organisations' interventions have had on the incorporation of agriculture into the UNFCCC, this study first begins by establishing the importance of approaching climate change and agriculture together, followed by an overview of the UNFCCC's meetings and agreements on agriculture thus far. This combines primary literature with anecdotal evidence from an interview with Martial Bernoux, Natural Resources Officer in the Climate and Environment Division of the FAO's Climate, Biodiversity, Land and Water Department, and who forms part of the FAO's delegation to the UNFCCC's negotiations on agriculture. Chapter three introduces the concept of 'institutional interaction' – the analytical framework with which the subsequent empirical analysis will be approached. Finally, the main body of the text consists of an analysis of the FAO's inputs to the UNFCCC negotiations

via document analysis, supported by contributions by Bernoux in order to assess to what extent, and in what ways the FAO may have positively influenced the SBSTA and the UNFCCC secretariat towards increasing its focus on agriculture, before concluding with thoughts on the future of agriculture within the Convention.

1. Setting the scene

Global average temperatures have been rising since the 1850s, partially due to the burning of fossil fuels for energy, but also – and lesser recognised – due to agricultural intensification to meet the needs of a growing population (FAO, 2008a). Thus, from the very start, agriculture has played a central role in the climate change story. These two topics are inseparable, and now more than ever they require a combined approach, given our current challenge: Updated projections predict that global population will reach 9.8 billion by 2050 (UN DESA, 2017), and furthermore – estimated already in 2012 – Alexandratos and Bruinsma (2012) famously estimated that agricultural output must increase by 60% by 2050 in order to feed a growing population. All of this while the IPCC reports that climate change's impacts on agricultural yields are already becoming apparent, putting at risk decades of progress towards achieving food security (Porter et al., 2014).

Agriculture has made miraculous progress in recent decades, with production more than tripling between 1960 and 2015 (FAO, 2017b). However, while undernourishment is still far lower than a decade ago, the number has recently *increased*, sitting at 11% in 2016 (FAO et al., 2017). Modern technological advances in agriculture and long-distance food chains have made the food system far less dependent on climate variability than before (FAO, 2008a). However, these technological advances and international food chains have in themselves been major contributors to climate change (FAO, 2008a).

Food security is the sum of the physical *availability* of food (food production), the economic and physical *access* to food (the household or individual level), food *utilisation* (the nutritional value), and the *stability* of these three. Therefore, as climate change progresses, reducing crop production, disrupting markets and distribution chains, and changing food's nutritional qualities, these internationalised food chains may impact food security at each of these levels (FAO, 2008a; FAO, 2008b). To

emphasise agriculture's relevance to the climate change negotiations, the agricultural sectors – crop production, animal rearing and fisheries – currently contribute, modestly estimating, at least 20% of global greenhouse gas emissions, making it the leading sector in driving climate change (FAO, 2016a).

As for climate change's effects on agriculture, while it is far from certain, climate change is expected to cause rising temperatures and drought in drier areas, changes in precipitation patterns and increased rainfall in wetter regions, and an increase in the frequency and intensity of extreme weather events worldwide (ibid.; FAO, 2008a). Likewise, increased aridity, groundwater depletion, and sea-level rise will decrease arable land, all putting strain on future agricultural production. It has been estimated that by 2050 – by which time we expect to be feeding 2 billion more inhabitants – 56% of crops in sub-Saharan Africa and 21% of crops in Asia will be negatively affected by climate change, either due to water availability, temperature change, and changes in the occurrence of pests (Campbell et al., 2011).

The climate-dependence of agriculture and agriculture's role in climate change make the two issues' interdependence evident. It's also clear that both issue areas face challenges that require coordinated action, and it is for this reason that the issue is gradually being taken up in the international climate change negotiations.

2. Contextualisation: the state of agriculture in the UNFCCC negotiations

As human activity's impact on the environment became apparent, in 1990 the United Nations General Assembly held its first meeting to address the issue, creating the UNFCCC (Levin et al., 2008). The UNFCCC was encharged with holding the annual Conference of the Parties (COP) to assess the Parties' progress in dealing with climate change, and is composed of a secretariat, the Subsidiary body for Scientific and Technological Advice (SBSTA), the Subsidiary Body for Implementation (SBI), and seven other bodies (ibid.; UNFCCC, 2018c). The first COP was held in Berlin in 1995, and 23 have taken place since (UNFCCC, 2018a). The Kyoto Protocol, which set the rules, targets and timelines, was adopted at the COP3 in 1997, and set into the "Marrakesh Accords" on implementation at COP7 (ibid.).

The importance of agriculture to climate change is evident, and furthermore, agriculture is the source of livelihood for 26% of the global population (World Bank, 2018). In sub-Saharan Africa, where one quarter of the population suffers from chronic hunger, *two thirds* of the population work in the agricultural sector – a trend replicated in most of the developing world (Kalfagianni et al., 2015). Appropriately – given agriculture’s environmental, economic and social importance – agriculture appears in the UNFCCC’s Article 2, which specifies that the stabilisation of greenhouse gas emissions should be achieved within a timeframe “to allow ecosystems to adapt naturally to climate change, *to ensure that food production is not threatened* and to enable economic development to proceed in a sustainable manner” (UNGA, 1994; emphasis added). Yet, despite this, agriculture has thus far had a minor role in the agreements that have emerged from the negotiations (Kalfagianni et al., 2015). Martial Bernoux, this study’s interviewee, gave some interesting insights into the first steps of agriculture appearing in the UNFCCC’s agenda. He explained that the UNFCCC had in fact made an intentional decision to avoid discussing specific sectors, in fear of losing sight of the “main focus” of reducing global GHG emissions with an economy-wide approach. But, Martial pointed out, “*Before that most people forgot that agriculture was already part of a group under the SBSTA, but it was the same group discussing ‘non-sectorial approaches’*”. Emphasising the UNFCCC’s dismissive attitude towards agriculture, he adds, “*Agriculture was put in, but like ‘the ugly duck that we will not discuss’, because the main focus of that group was on fuel bunkers.*”

It was not until the COP17 in Durban, 2011, that the Parties first seriously discussed agriculture, and mandated the SBSTA to “*consider issues related to agriculture at its 36th session, with the aim of exchanging views and the COP adopting a decision on this matter at its eighteenth session*” (UNFCCC, 2012a: 16). According to Bernoux, this decision was influenced by the 2007-2008 food crisis and the food price increase, which woke people up to the importance of agriculture. Furthermore, advocates began to argue that the number of people reliant on the agricultural sectors made these sectors unique, and began putting pressure on the UNFCCC to consider agriculture in its agenda. With this socioeconomic background, at its 36th session the SBSTA reviewed the first of a series of Party submissions on ‘issues related to agriculture’,

yet the session was inconclusive and no decision was adopted by the Parties at the COP18 as planned (Kalfagianni et al., 2015).

Beginning to investigate the FAO's influence, when asked if the FAO participated in this movement for the UNFCCC to consider agriculture, Bernoux explained, *"Yes and no... People realised that international aid for development was targeting agriculture less and less, in all the conventions agriculture and food dimensions were not prominent, and then some people in the FAO were asking, 'what can we do to advance that agenda, and show countries that this is an arena where agriculture should have a place?' and this is when FAO started with the climate-smart agriculture concept... The origin of the climate-smart agriculture was just that, to put agriculture into the debate and the international agenda."* The FAO's climate-smart agriculture concept was officially adopted in 2010 (FAO, 2017a) and the COP17 decision to transfer agriculture to the SBSTA, in 2011 (UNFCCC, 2012a).

Beginning the UNFCCC-FAO collaboration, at its 39th session the SBSTA held its first workshop on agriculture, inviting FAO to give the opening presentation (UNFCCC, 2014a). The FAO introduced the climate-smart agriculture concept, which it has presented as an ideal form of climate change adaptation and mitigation since. Following this, at its 40th session the SBSTA established a two-year research plan for four further workshops, covering *"(a) development of early warning systems... (b) assessment of risk and vulnerability of agricultural systems... (c) identification of adaptation measures... and, (d) identification and assessment of agricultural practices and technologies to enhance productivity in a sustainable manner..."* (UNFCCC, 2014b: 18). (UNFCCC, 2014b). The four workshops were held between the SBSTA's 42nd and 44th sessions, and receiving interventions from the FAO, CGIAR, WFP, and IFAD, inter alia. At the SBSTA's 47th session a draft decision on 'issues related to agriculture' was submitted to the COP23, which became the 'Koronivia joint work on agriculture' agreement at the same Conference in November 2017 (UNFCCC, 2017b). the 'Koronivia joint work on agriculture' (KJWA) differs from the first COP decision in that it requests both the SBSTA *and* the SBI *"to jointly address issues related to agriculture, including through workshops and expert meetings, working with constituted bodies under the Convention and taking into consideration the vulnerabilities of agriculture to climate change and approaches to addressing food*

security;” (UNFCCC, 2017b: 19), receiving a positive reaction from the community of organisations working on food security (CCAFS, 2017).

Table of key sessions and agreements

<i>COP 17</i> <i>(Nov 2011)</i>	The COP first requests the SBSTA to consider agriculture.
<i>SBSTA 36</i> <i>(May 2012)</i>	The SBSTA first discusses agriculture based on Party submissions.
<i>SBSTA 39</i> <i>(Nov 2013)</i>	The first workshop is held on adaptation measures.
<i>SBSTA 40</i> <i>(June 2014)</i>	The SBSTA establishes a two-year research agenda.
<i>SBSTA 42</i> <i>(June 2015)</i>	Workshops two and three are held.
<i>SBSTA 44</i> <i>(May 2016)</i>	Workshops four and five are held.
<i>SBSTA 47</i> <i>(Nov 2017)</i>	The SBSTA recommends a draft decision to the COP.
<i>COP 23</i> <i>(Nov 2017)</i>	The COP adopts the SBSTA’s draft decision, known as the 'Koronivia joint work on agriculture'.
<i>SBSTA and SBI 48</i> <i>(April 2018)</i>	The SBSTA and SBI address the KJWA for the first time.

3. Theoretical framework: Institutional Interaction

3.1 Introduction and key definitions

Institutional interaction occurs if one institution – the source institution – impacts the activities, effectiveness or preferences of another – the target institution (Gehring and Oberthür, 2009). To this, Underdal and Young (2004) add that institutional interaction is the consequence of international institutions interacting beyond their own domain. The effects of institutional interaction may be disruptive, neutral or synergistic, and are measurable in terms of the target institution's progress in achieving its governance objective – climate change mitigation and adaptation in the case of the UNFCCC (the target institution of this study) and food security in the case of the FAO (the source institution of this study) (Gehring and Oberthür, 2009). Gehring and Oberthür – leading researchers in the field – argue that although institutional interaction is often framed as being disruptive – arguments frequently based on environmental regulation conflicting with free-trade agreements – their empirical studies show that institutional interaction tends to have more synergetic than conflictive effects (Gehring and Oberthür, 2008; Gehring and Oberthür 2004). The authors argue that institutional interaction is especially applicable to environmental politics, given the fragmented nature of the environmental and climate change regimes (ibid.).

Before identifying the types of institutional interaction that'll serve this study's empirical analysis, the following are some key definitions. The institutions involved in institutional interaction can include international organisations, regimes, states, and non-governmental organisations, inter alia. Keohane provides a commonly-accepted definition of international institutions, defining them as “persistent and connected sets of formal and informal rules and practices that prescribe behavioural roles, constrain activity, and shape expectations” (Keohane, 1989: 3). As for regimes, this study follows Young's definition of “social institutions that define practices, assign roles and guide the interaction of occupants of such roles within given issue areas” (Young, 1994: 3).

3.2 Different forms of institutional interaction

There is no one type of institutional interaction, as it varies according to the setting, types of institutions, hierarchy between them, the purpose and the intentionality of their interaction, etc.

Stokke (2001) for example makes the distinction between *utilitarian*, *normative* and *ideational* regime interplay. *Utilitarian interplay* refers to how interaction with a source institutional may affect the costs or benefits of certain actions for the target institution. *Normative interplay* refers to how interaction can lead to the transfer of norms and values from the source to the target institution (ibid.). *Ideational interplay* – likely to be the most applicable to this study – relates to how activities within the source institution raise the “cognitive prominence” of its issue area, enhancing problem-solving within the target regime in one of two ways: first, by increasing concern for these issues, thus creating political will to address them, and second, by raising awareness of potential solutions to this problem, i.e. via policy transfer (ibid.: p. 20). This could be exemplified by the FAO, IFAD, CGIAR, etc. sharing their views and presenting their recommendations on how to integrate food security and climate change action in the SBSTA workshops.

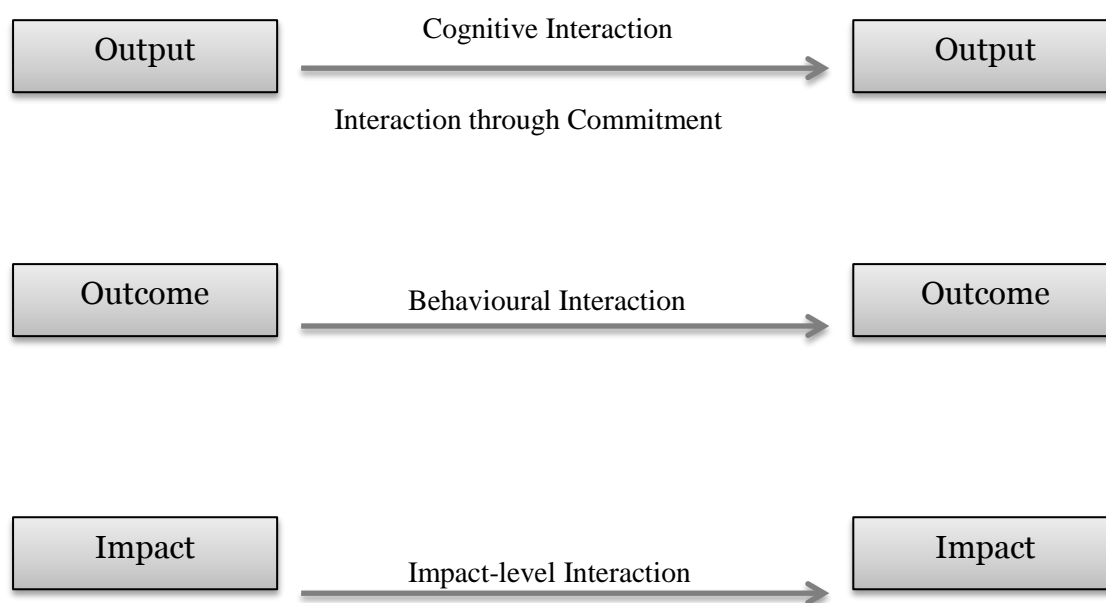
3.3 The causal mechanisms of institutional interaction

Gehring and Oberthür develop a series of *causal mechanisms* to analyse empirical cases of institutional interaction, which will form the central framework of this study. According to the authors, identifying a particular causal mechanism in practice requires identifying a source institution, a target institution, and a cause-effect relationship that explains the observed effect (Gehring and Oberthür, 2004).

Gehring and Oberthür’s causal mechanisms function within their “effectiveness cascade” (Gehring and Oberthür, 2009: 131), which covers three stages of governance (ibid.). The first is the *output* stage – the first phase of the target institution’s activity, at which it produces its norms or rules. For this study’s target institution – the UNFCCC – examples of output could include the SBSTA’s reports to the secretariat, the COP agreements, etc. The two causal mechanisms that can take place at this first stage are Cognitive Interaction and Interaction through Commitment. As these causal

mechanisms refer to interaction at the policy formulation stage, and this study focuses on institutional interaction during the formulation of an agreement on agriculture, these two causal mechanisms can be expected to be the most prominent in the empirical analysis. Second, at the second governance phase – referred to the *outcome* stage, Gehring and Oberthür identify the causal mechanism of Behavioural Interaction. Finally, at the *impact* stage we find the fourth and final causal mechanism, Impact-Level Interaction.

Gehring and Oberthür's "effectiveness cascade"



(“Causal Mechanisms and Levels of Effectiveness”, Gehring and Oberthür, 2009: 131)

4. Evidence of the causal mechanisms of institutional interaction

This chapter looks at each of Gehring and Oberthür's four causal mechanisms in more depth, discussing any evidence of each one taking place between the FAO and the UNFCCC. This section is based on primary literature from the FAO's inputs to the SBSTA's workshops, and the UNFCCC and its signatories' outputs. Simultaneously, analysis of these documents is both supported and refuted with insights from the interview with Martial Bernoux.

4.1 Interaction at the *output* stage

Cognitive Interaction

The first causal mechanism of the *output* stage, this causal mechanism is based on knowledge and ideas, and Gehring and Oberthür frame Cognitive Interaction as “inter-institutional learning” (2009: 132). Cognitive Interaction follows three steps: The source institution generates new information such as a report or a policy proposal (e.g. the FAO’s yearly ‘The State of Food and Agriculture’ reports, or models for implementing climate-smart agriculture). Next, an actor (e.g. a delegate from the source institution) transfers this information to the target institution, altering the relevant actors’ – the Parties’ – preferences, and finally influences its *output* (its rules and norms). (ibid.). Cognitive Interaction can be further divided into two sub-categories: unintentionally-triggered – in which the source institution is passively used as a policy model – and intentionally-triggered, or a request for assistance, which is what takes place in this instance, as the UNFCCC secretariat asks the FAO to give an opening presentation at the SBSTA’s workshops on agriculture. (ibid.) This section begins by looking at the SBSTA’s final workshop on ‘issues related to agriculture’ before the drafting of the ‘Koronivia joint work on agriculture’ agreement (KJWA). Next, it looks at any evidence of Cognitive Interaction in the content of the KJWA agreement itself, supported by anecdotal evidence from Bernoux on his experience of the SBSTA workshops to help reflect on these assumptions.

The fifth and final workshop on agriculture was opened by an FAO representative who highlighted, amongst other things, the importance of *gender* considerations in agriculture, the creation of *incentives* for farmers to adopt conservation agriculture, the importance of cultivating a *diversity of crops*, promoting *sustainable soil and pest management*, and considering *indigenous and traditional knowledge* (FAO, 2016c). The UNFCCC’s workshop report registers the importance of each of these topics, opening, “*The introductory presentation made by the representative of the FAO provided a broad overview of the concept of productivity in agriculture... [Including] preserving soil fertility, enhancing resilience and conserving crop diversity...*” and it clearly affirms, “*It is important to enhance the sharing of information and knowledge, including indigenous and local knowledge*” (UNFCCC, 2016: 5). The report then

describes part II of the workshop in which the Parties discussed all of the issues from the FAO's presentation mentioned above, and as this discussion and report were used for the preparation of the KJWA, it is possible that the FAO's presentations indirectly influenced the UNFCCC's most important decision on agriculture to date.

Indeed, talking to Bernoux it is clear that the FAO has a unique role in the negotiations, allowing for this type of interaction. Bernoux explains, *"As part of the UNFCCC process [the secretariat] has to organise 10 technical expert meetings – 10 on mitigation, 10 on adaptation. One year ago, the 10 on mitigation were on agriculture, so they officially asked the FAO to be the technical support to those meetings. So, the FAO was even inviting the participants to organise that session. But the secretariat was saying 'be careful, you missed that, you missed that, you need to have a Latin American country, a developing country, etc.'"* This example – especially as the organisation was delegated to the FAO – shows that the FAO does have a special role as a source of information in the UNFCCC negotiations on all issues related to agriculture and food security. However, Bernoux also shows the highly politicised nature of the UNFCCC sessions – a point that he raises a number of times.

Further investigating the extent of the FAO's influence, discussing Bernoux's experience of the workshops, he gave the impression that rather than the FAO directly influencing the UNFCCC secretariat itself – he was clear on the separation of the two organisations' functions – the FAO's main role is that of a point of reference, a consistent advocate for agriculture and a reminder of agriculture's importance for climate change adaptation and mitigation. *"The FAO was intervening as an external observer, but setting the scene in some of the workshops on implementing the climate-smart agriculture concept, so it was a way of trying to say to people, 'look, agriculture should be part of the process'."* It seems therefore that the FAO may have played a role in what Stokke calls "raising the cognitive prominence" of agriculture for climate change mitigation and adaptation within the target institution, and it is also clear that promoting its climate-smart agriculture concept has been an important part of the FAO's work in the UNFCCC (Stokke, 2001: p. 20).

Next, for Cognitive Interaction to take place, the source institution's ideas must

impact the target institution's *output*, not just the debate within its fora, and therefore this section looks at the content of the recent 'Koronivia joint work on agriculture' agreement itself. The novelty of the KJWA is the inclusion of agriculture in the SBI's agenda and the invitation of other bodies under the Convention to participate in dialogue on 'issues related to agriculture', but the agreement also identifies specific topics to be discussed in the SBSTA/SBI joint meetings, including:

- “(a) Modalities for implementation of the outcomes of the five in-session workshops on issues related to agriculture and other future topics that may arise from this work;*
- (b) Methods and approaches for assessing adaptation, adaptation co-benefits and resilience;*
- (c) Improved soil carbon, soil health and soil fertility under grassland and cropland as well as integrated systems, including water management;*
- (d) Improved nutrient use and manure management towards sustainable and resilient agricultural systems;*
- (e) Improved livestock management systems;*
- (f) Socioeconomic and food security dimensions of climate change in the agricultural sector;” (UNFCCC, 2017b)*

Much of the KJWA content mirrors that of the workshops, including “*adaptation co-benefits*” (from workshops 1 and 4), “*soil carbon*” (workshop 2), “*improved grassland and cropland*” (workshop 5), “*water management*” (workshop 2), “*sustainable agricultural systems*” (workshops 1 and 5), and “*socioeconomic and food security dimensions*” (workshops 1, 4 and 5). The idea of “*resilience*” is also clearly prominent in the 'Koronivia joint work on agriculture', and this too has been a key message throughout the FAO's inputs. For example, in its submission to the SBSTA's 44th session on adaptation measures it identifies,

“Six key areas of adaptation measures in the agriculture sectors and for food security:

- ☐ *Increase resilience of livelihoods*
- ☐ *Build resilience of agricultural systems*
- ☐ *Managing genetic resources*

- *Investing in resilient agricultural development*
- *Investing in systems to assess risks, vulnerabilities and adaptation options*
- *Enabling adaptation through policies and institutions”*

(FAO, 2016d: p. 3; emphasis added).

Primary literature analysis in isolation can give the impression that Cognitive Interaction undoubtedly takes place between the two institutions, but the conversation with Bernoux made it clear that any influence from the FAO to the UNFCCC is certainly indirect. When asked if the FAO has been involved in the organisation of the SBSTA workshops, or whether the planning is done by the secretariat alone, he responded, *“The secretariat invited the FAO to give some 10 minute summary of the topic, of their views, that’s it. It was just as an observer, and they were always really carefully politically correct presentations... it is the secretariat that is really in charge of implementing.”* Likewise, in order to help explain any replication of terms, when asked if the KJWA was drafted solely by the Parties, or whether observer organisations were given some voice in the agreement, Bernoux confirmed that no, the drafting is done by the Parties alone. But, does the secretariat approach the FAO for advice in the preparation of its workshops? *“We are constantly in contact with the UNFCCC... We exchange, but we are aware that we are two different constituencies with two different ways of functioning.”*

At times it seems that the FAO’s role is quite limited, as Bernoux continues, *“The role of the FAO in the process has been really diffused. Submission is one thing, it can sometimes serve countries when they are negotiating... they use your submission just to defend their position”*. Influencing the decision-making body of the target institution is stage two of Cognitive Interaction, and therefore, if the FAO’s message gets through to the Parties to the Convention it’s likely it’ll reach the UNFCCC agreement, triggering Cognitive Interaction. Although the FAO’s influence is limited to the transmission of ideas during its brief interventions, it becomes clear that the key opportunity for the FAO to influence the UNFCCC in favour of prioritising agriculture is for the FAO’s message to reach the Parties, as they are the ones behind the UNFCCC agreements.

Interaction through Commitment

Also occurring at the *output* stage, Interaction through Commitment is a causal mechanism that takes place between two institutions with overlapping memberships and issue-areas. This could occur between the FAO and the UNFCCC given their near-universal United Nations membership and the functional linkage between their issue areas – the natural interdependence between agriculture and climate change (Young et al., 1999). Interaction through Commitment refers to the transferral of a commitment from the source to the target institution, or a change in the negotiating behaviour of the target institution's members' as a result of their shared commitment within the source institution, altering the target institution's output (Gehring and Oberthür, 2009).

Interaction through Commitment could benefit the incorporation of agriculture into the UNFCCC in two ways: first, as countries participate independently in the FAO's activities, and the FAO frequently inputs messages on the agriculture-climate nexus, these same negotiators may be more willing to incorporate agriculture into the UNFCCC agreements when negotiating within that forum, as they have already been primed by the FAO's views. The second way is by triggering an 'additional means' (Gehring and Oberthür, 2009). In this case, transferring a commitment from the source to the target institution subjects this commitment to a new set of governance mechanisms that are available to the target institution, but that were not available to the source institution. For example, if a commitment is transferred from an institution that employs soft law to one employing hard law, the commitment will be strengthened (Gehring and Oberthür, 2009).

To take one recent example of Parties transferring ideas on agriculture's incorporation into the UNFCCC from the FAO to the UNFCCC, in March 2018 the FAO invited the UNFCCC agriculture negotiators to an informal 'Koronivia dialogue' with the aims of helping Parties prepare their KJWA submissions and discussing views in preparation for the SBSTA's and SBI's 48th sessions (FAO, 2018). According to the FAO's report on the seminar, Parties discussed and agreed on the importance of climate-smart agriculture, agricultural heritage systems, crop

diversification, and low carbon adaptation, inter alia. (ibid.). Participants also “*elaborated on the need for a ‘work plan’ or a ‘roadmap’ that would guide SBI and SBSTA on milestones that need to be achieved before reporting back to the Conference of Parties*” (ibid.: 2). Sure enough, following document analysis to the UNFCCC’s output, at the SBSTA and SBI’s joint 48th sessions (held from the 30th April-10th May 2018) during which the KJWA was dealt with for the first time, a ‘roadmap’, was established, specifying all the topics of discussion in relation to agriculture up until November 2020 – just as had been discussed in the ‘Koronivia dialogue’ (UNFCCC, 2018b).

While talking with Bernoux, he raised the topic of the ‘Koronivia dialogue’ himself, in which he participated. He explained the reason behind the meeting saying that the FAO and the CGIAR’s Research Programme on Climate Change, Agriculture and Food Security (CCAFS)’s delegations to the UNFCCC had observed that the Parties were not reaching consensus in the workshops, and agreed that building familiarity and trust between the negotiators would improve decision-making. Therefore, to speed up the process the FAO and the CCAFS – with which the FAO collaborates – began to organise informal inter-sessional meetings for the UNFCCC’s negotiators on agriculture, of which the ‘Koronivia dialogue’ was one. The idea – in the words of Bernoux – was to give the negotiators the chance “*to discuss and exchange in an informal context, while they are not representing their country, and try to find a way to move forwards and [find] at least some minimum level of agreement.*” Explaining that these were non-official meetings, and highlighting the overlapping membership between the organisations, Bernoux explained, “*These are technical meetings of experts that are just representing themselves. By chance, they are the negotiators of agriculture.*”

Bernoux used the same example as this study had identified above to illustrate the success of these meetings, saying “*In [the ‘Koronivia dialogue’] some countries mentioned it would be nice to have a roadmap, and then, [at SBSTA/SBI48], they decided to have a roadmap.*” This particular case seems to confirm this study’s argument that Interaction through Commitment does take place between the FAO and the UNFCCC, as the idea of the roadmap – hatched within the FAO’s setting, with its own members – was transferred to the UNFCCC negotiations and set into its

agreement by the same negotiators.

Despite the FAO and UNFCCC's complementary work however, their close collaboration did once produce potential for tension. According to Gehring and Oberthür, within the causal mechanism of Interaction through Commitment, a need for 'Jurisdictional Delimitation' can arise if two institutions with similar memberships but different objectives address the same issue (Gehring and Oberthür, 2009). Jurisdictional Delimitation occurs when the source institution encroaches upon the target institution's issue area, causing disruptive effects on the target institution, and leading to a demand for the institutions to separate their areas of work (ibid.). During the document analysis of the FAO's interventions in the UNFCCC nothing of this sort was apparent. However, Bernoux explained that the UNFCCC's COP decisions ask the Parties to submit their views but do not ask the secretariat to compile these. Therefore, the FAO began preparing synthesis reports of its own accord on the prevalence of agriculture in the Parties' submissions. But, *"That was really sensitive, because we are doing the job of the secretariat which it was not asked to do."* Martial explained, *"I remember one of the G77 representatives saying, 'what is the FAO doing? Would the FAO be happy if the UNFCCC secretariat wrote a document on the 'State of Food Security'?' But for us to understand the challenge we are facing, we need to understand what is happening, so we are just reading documents, it is a factual reading, we are just saying which Parties are saying what, we have no judgement and no opinion."* To gauge whether this led to Jurisdictional Delimitation, when asked if there was any response from the UNFCCC secretariat on these reports, Bernoux answered that the secretariat was fine with the FAO's analyses; in fact, *"the secretariat was not complaining, because it's also useful for them."*

Overall, Interaction through Commitment is more prevalent than expected between the FAO and the UNFCCC, especially due to the organisations' shared membership. Bernoux emphasises that these are not only the same countries participating in both organisations, but the same *donor* countries, creating an extra commitment to both institutions' objectives for the Parties.

4.2 Interaction at the *outcome* stage

At the second or *outcome* level of governance, Gehring and Oberthür identify one causal mechanism: Behavioural Interaction. This causal mechanism may or may not be intentional, and may even go unnoticed. It refers to the behavioural changes that the source institution's output can trigger in the target institution's actors' output, impacting the target institution's effectiveness (ibid.). Behavioural change caused by the source institution could either compliment or be at odds with the objectives of the target institution's objective, but synergy will occur if the same group of actors addresses the same issue within two institutions pursuing the same objectives (ibid.). The FAO and UNFCCC do not share governance objectives – one fighting hunger and the other climate change – but while the UNFCCC is negotiating an agreement on agriculture, their objectives temporarily overlap, creating a window for synergy via Behavioural Interaction. To assess whether this causal mechanism takes place between the FAO and UNFCCC, this section discusses the Parties' 2015 Intended Nationally Determined Contributions.

The Intended Nationally Determined Contributions (INDCs) were a set of Party submissions that guided the 2015 COP21 negotiations, and formed the basis for the Paris Agreement (UNFCCC, 2015a). They later become the Parties' Nationally Determined Contributions (NDCs), specifying their climate change priorities post-2020 (FAO, 2016b.). According to Bernoux, this process “*was completely different to in the past, shifting from a top-down to a bottom-up approach to have all countries on board.*”

It is unclear whether interaction between the FAO and the Parties' INDCs should be qualified as Cognitive Interaction, as the INDCs are written submissions and could therefore correspond to the *output* stage, or Behavioural Interaction, as this refers to the source institution's effect on the individual actors within the target institution. This study chooses the latter. Either way, the INDCs show clear signs of the Parties' progress in recognising the importance of agriculture in their strategies for climate change mitigation and adaptation.

During the interview, Bernoux used the example of the NDC process to talk about the FAO's role in the negotiations, explaining “*And another role that we played, this was when the Paris Agreement adopted the NDC process, was analysing these, and saying*

'look, 98% of countries put agriculture in their NDCs, so we need to move.' So the FAO was analysing these and showing everyone that *'ok, what you are seeing is that we need agriculture'*". It's not an official role, he clarifies, emphasising that the two organisations have separate agendas, *"we are the UN organisation to fight hunger, not to work on climate."* This unofficial role of highlighting the importance of agriculture for climate change through the submissions affirms – as concluded in section 4.1 on Cognitive Interaction – that the FAO's involvement in the negotiations serves as a constant reminder to both the secretariat and the Parties of agriculture's importance for climate change action.

As a dedicated FAO report on the inclusion of agriculture in the INDCs notes – and to which Bernoux contributed – of the 189 countries that submitted, all make clear references to mitigation measures, and agriculture and LULUCF (land use, land-use change and forestry) were among the most prioritised sectors for climate change mitigation (ibid.). Specifically, LULUCF featured in 83% of INDCs, crops and livestock in 78%, and if these two are combined with INDCs that mention bioenergy, the percentage rises to 92% (ibid.). Furthermore, following the institutions' aim to move the discourse from mitigation towards adaptation, 71% of Parties in total and 95% of developing country Parties referenced adaptation measures in their INDCs, and the agricultural sectors were the leading sectors in this area (ibid.). Amongst the 131 Parties that included adaptation plans in relation to the agricultural sectors, 97% refer to crops and livestock, 88% to forests, and 64% to fisheries and aquaculture (ibid.).

According to the FAO report, many developing country Parties' INDCs *"link adaptation to the eradication of poverty and their aim to become a middle-income country"* (FAO, 2016b: 9). These Parties recognise that agriculture must be central to their economic development, generate employment, and boost exports (FAO, 2016b). This is interesting, as throughout the SBSTA workshop process the FAO has framed sustainable agricultural development as a form of simultaneously mitigating and adapting to climate change and alleviating poverty. For example, in the SBSTA's first workshop on agriculture at its 39th session, the FAO representative stated, *"building resilient food systems is therefore a priority to ensure food security, livelihoods and economic growth"* (ibid.). The FAO refers to synergies and co-benefits in agricultural

adaptation in all its interventions, and in this report on the Parties' INDCs it states, *“co-benefits most often refer to rural development and health, poverty reduction and job creation, conservation of ecosystems and biodiversity and improving gender equality.”* (FAO, 2016b: 43). One example of a Party adopting this approach is Swaziland, whose INDC states its intention to *“increase the contribution of agriculture to economic development, food security and exports... Reduce poverty and improve food and nutrition security through sustainable use of natural resources and improved access to markets”* (FAO, 2016b: 39). It seems possible therefore that the FAO's output on the co-benefits between climate-smart agriculture and sustainable economic development and adopted has influenced the Parties' outputs, triggering Behavioural Interaction.

The report also celebrates the Parties' progress in recognising the potential for mitigation-adaptation co-benefits and synergies in their INDCs, with 116 countries referring to the agriculture sector in reference to both of these. In particular, climate-smart agriculture – which capitalises on mitigation-adaptation synergies – was quoted in 32 INDCs (FAO, 2016b). This study will now look at two cases of Parties that incorporated climate-smart agriculture into their INDCs in order to gauge to what extent they may or may not have been influenced by the FAO and the UNFCCC negotiation process: Zimbabwe and Uruguay.

First of all, Zimbabwe's INDC and a number of projects on the ground seem to show a growing interest in climate-smart agriculture in the country (UNFCCC, 2015c). However, at the SBSTA's 38th session in June 2013 the Parties were asked to submit their first views on 'issues related to agriculture', and although Zimbabwe is represented by the African Group of Negotiators, Zimbabwe did not submit. The country went from disassociation from the SBSTA's discussion on agriculture in 2013, to submitting an INDC in 2015 which mentions agriculture 12 times and climate-smart agriculture 4 times, specifying on page 2 that *“climate change adaptation in the agricultural sector [is] a national priority”* (UNFCCC, 2015c: 2). Terms such as “sustainable intensification” “agro-forestry”, “resilience” and “diversification” appear throughout, all of which have appeared repeatedly in the FAO's recommendations to the Parties in its SBSTA interventions. Seeing that the country seems to have gained a strong interest in climate change adaptation through

the agricultural sectors *in the course of* the SBSTA workshop process, the content of its submission is in-line with the FAO's recommendations, and the FAO works in the implementation of climate-smart agriculture projects on the ground in Zimbabwe (FAO, n.d.), it seems possible that the FAO's output has produced a certain level of Behavioural Interaction in this case.

On the other hand, another Party whose INDC shows strong interest in climate-smart agriculture is Uruguay, although whether this is influenced by the FAO's output is unclear. On the one hand, Uruguay's INDC even references the incorporation of FAO recommendations, clearly suggesting Behavioural Interaction: *"as a result of the 2010 Climate-Smart Agriculture Policy, Uruguay has made, and will continue to make, efforts to build a more efficient, resilient and low-carbon cattle farming sector"* (UNFCCC, 2015b: 5). However, it would be simplistic to conclude that the mention of the climate-smart agriculture concept proves Behavioural Interaction with the FAO because since the 1960s Uruguay has long been a pioneer in conservation agriculture (The World Bank & CIAT, 2015). The Ministry of Livestock, Agriculture and Fisheries prioritises sustainable intensification, resource conservation and emissions removal through afforestation, and recently reported a simultaneous decline in land used for livestock grazing and an increase in livestock production, indicating increasing efficiency (ibid.). Therefore, while it quoted an FAO concept, it is more likely that Uruguay is a leader in conservation agriculture independently from the FAO's influence, and that there is no case for institutional interaction in this case.

The conversation with Bernoux showed the difficulties of coming to conclusions about the Parties' interest in the issue. He explained that many other countries have rapidly adopted agriculture into their agendas in recent years. According to him, *"Some countries were not part of the process in the past because in the SBSTA there were 35 people negotiating, and [the others] said 'ok, let's leave them negotiate'. But then, a real COP decision, that means all countries, so some countries were saying 'ok, we have not been following so far, but we want to be part of that process.'"* At which point, he went on, these countries rapidly incorporated agriculture into their submissions. While this doesn't make Behavioural Interaction between the FAO and Zimbabwe impossible, seeing as the INDCs were submitted in 2015 and the COP decision was agreed in 2017, Bernoux showed that this rapid adoption of agriculture

has been very widespread. For that reason, Zimbabwe's discourse on agriculture could actually just be part of a wider movement on behalf of the Parties of feeling the need to participate in the new COP decision, rather than a genuine interest in climate-smart agriculture, or a case of institutional interaction with the FAO.

4.3 Interaction at the *impact* stage

Fourth and finally, at the *impact* level, we find Impact-level Interaction. This causal mechanism relies on the functional interdependence of the governance objectives of the two institutions (Gehring and Oberthür, 2009). In this case, the governance target of the target institution is directly influenced by the side effects of the governance target of the source institution, influencing the target institution's effectiveness. This causal mechanism does not require any effort on behalf of the source institution, but the interaction is rather an unavoidable effect of the two objectives' interdependence (Young, 2002). In order for this to take place the source institution produces an output; next, actors within its domain change their behaviour accordingly, affecting the source institution's governance objective. Finally, this effect impacts the effectiveness of the *target* institution's objective (Gehring and Oberthür, 2009). A common example is the Impact-level Interaction between the WTO and the climate regime, as increased international trade promoted by the former increases emissions, impacting the latter's governance objective – the reduction of global emissions (ibid.). This is one case of disruptive interaction, though interaction may be disruptive, neutral and synergistic. Overall, this study has found little to no evidence of impact-level interaction between the FAO and the UNFCCC.

5. *Concluding thoughts*

This study set out to understand whether the international organisations that work on agricultural sustainability have played an important role in increasing the importance of agriculture within the United Nations Framework Convention on Climate Change. Using the theoretical framework of institutional interaction, this study approached an analysis of the primary literature from the SBSTA meetings and UNFCCC negotiations to see whether these organisations have influenced the five-year process that recently led to the 'Koronivia joint work on agriculture' agreement. During the investigation process, this study honed in on the interventions of the Food and

Agriculture Organization of the United Nations in particular, based on Gehring and Oberthür's four causal mechanisms of institutional interaction.

While this study began with the expectation to find almost solely Cognitive Interaction in the document analysis, it has been interesting to identify potential cases of almost all the causal mechanisms. Cognitive Interaction does seem to have taken place, but while it initially seemed that Interaction through Commitment would not be especially prominent, the conversation with Bernoux showed how the organisations' overlapping memberships is a defining feature of the FAO and the UNFCCC's relationship. It seems that this mutual commitment makes the Parties the prime channel for institutional interaction in the negotiation process, as they collectively transfer the ideas discussed within the FAO to the UNFCCC, as in the case of the FAO's informal meetings for agricultural negotiators. Likewise, the fact that the FAO does not have direct access to the UNFCCC decision-making process, yet its output does seem to sometimes influence the individual Parties – as Bernoux mentioned, the Parties sometimes use FAO submissions to justify their arguments in negotiations, or they approach the FAO for support in their submissions – again suggests that the FAO's main portal of influence would be via the Parties, seeing as they are the ones who formulate the agreements. This study also identified some occurrence of Behavioural Interaction through the Parties' INDCs, though the interview with Bernoux was a reminder that it is not always easy to reliably track a source of influence. Therefore, future areas of research could include approaching this same question but including interviews from the Parties in order to gauge where their growing interest in agriculture and climate-smart agriculture originates from, in order to complement an assessment of institutional interaction between these two organisations. The only causal mechanism that seemed absent from the empirical analysis was Impact-level interaction.

Through an initial document analysis this study built a clear idea of the occurrence of different causal mechanisms of institutional interaction, but the conversation with Martial Bernoux added valuable perspective to this interpretation. He balanced these conclusions by emphasising the separation of the two institution's domains, highlighting that the FAO only has limited access to the UNFCCC decision-making process, illustrating the politicisation of the negotiations, and showing that the Parties'

growing awareness of the importance of agriculture for climate change adaptation and mitigation is not necessarily due to the FAO alone, but also a sense of urgency to participate in the new COP decision. Although Bernoux added some realism to this study's assumptions of institutional interaction between the FAO and UNFCCC with these points and others, he also spoke of the success of the FAO's informal UNFCCC meetings, and of how their conclusions – such as the roadmap – had been incorporated into the UNFCCC agreements, and made clear the FAO's unique role within the UNFCCC. Between the suggestion of institutional interaction shown through the primary literature and the anecdotal evidence from Bernoux, this study concludes that institutional interaction does indeed occur between the FAO and UNFCCC, but it is more diffused than initially expected, with influence travelling indirectly from the source to the target institution via the Parties, rather than the FAO influencing the secretariat directly.

Coming back to the political context in which this study began – the much-celebrated November 2017 'Koronivia joint work on agriculture' –, when asked if the agreement is as much of a landmark decision as it has been made out to be, Bernoux replied, *“It is an important decision in terms of the other scenario – without Koronivia. We would say, basically, game over. We would not discuss it any longer, agriculture would be treated by countries under their NDCs like all the other sectors, but we would not have any specific discussion on agriculture. The topics included in the agreement are fine, but the most important part is to have that text alive. Putting together the SBSTA and SBI. Having the SBI on board, and the other bodies – do not forget the other bodies. This is really important because if it's only SBSTA, ok, scientific advice, advice, but you do what you want. But with SBI, it changes the game a little bit.”* He did recognise however, *“Some NGOs are unhappy that they are still talking about workshops and submissions, but at least the topics are clearly identified, and they will work with the SBSTA/SBI co-chair, they will link with the other UNFCCC bodies... so it is really a new momentum.”* How will the SBI deal with agriculture differently? *“If they want to move, they can ask [the COP] to recognise that agriculture should be treated in a certain manner, and so, the SBI can decide a lot. And in the bodies you have the standing committee on finance, so the standing committee on finance can decide to ask the Green Climate Fund and the Global Environment Facility – which are not bodies but instrumental financial mechanisms – to pay more attention to that*

topic.” It seems that Bernoux, despite his realism on the difficulties of reaching consensus between the parties, does see the KJWA as a fundamental step for putting agriculture’s in its due place – at the centre of a global effort for climate change adaptation and mitigation.

As for the FAO’s future role in the negotiations, Bernoux clarified that the FAO would continue to provide “*technical background documents*”, submit their views when invited, as well as invite Parties to use FAO forums when queries arise – inviting future cases of Interaction through Commitment. It seems that all in all, the relationship between the two institutions is a close but non-intrusive agreement, as Bernoux concludes, “*we will try to follow the negotiations, we will probably propose some technical meetings on some topics... the FAO will always say ‘we stand ready to support the UNFCCC if the UNFCCC requests us’.*”

Wrapping up the discussion, when asked if he thinks agriculture will continue to grow under the UNFCCC, he immediately responded, “*Yes. Because there is no choice.*” Elaborating, he believes that all sectors are moving to decrease their emissions, but that agriculture is lagging behind. “*So we have no choice. We need to move. If you look at the IPCC report there is no way to reach the 2 degree C target without agriculture and all the terrestrial sinks on board... [The Parties] are really sensitive to that. They do not know how to move exactly, there are a lot of disagreements, it is complex, but they realise that there is no way to use the politics of the ostrich. It’s not easy, because agriculture has a lot of sensitive international debates – pesticides, GMOs, diet... they are very complex issues. That was why the UNFCCC at the beginning was so reluctant to move on such a complex agenda. But no, they have no choice. They have to move on that agenda. If it’s not the UNFCCC, it’ll be another.*”

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